# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN STRIKING-CLOCKS.

Specification forming part of Letters Patent No. **131,175**, dated September 10, 1872.

*To all whom it may concern:*

Be it known that I, LAURENCE MYERS, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Clocks, which I call an Angelus Clock; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use my invention, reference being had to the accompanying drawing, which represents in longitudinal elevation the works of a clock provided with my improvement.

My invention consists in so constructing a clock that it shall strike the Angelus automatically; and I accomplish this object by means of the mechanism now to be described.

A in the drawing represents the frame of a clock, in which are mounted the usual motor, train of wheels, and pendulum escapement, whereby the hands are caused to revolve. These wheels are shown on the right-hand side of the frame, (the pinions being indicated by dotted lines,) and operate in the usual manner. On the left-hand side of the frame are shown the motor and train of wheels which actuate the hammer to strike the Angelus upon a bell, not seen in the drawing. The motor is here represented as a spring, but in clocks of large size I prefer a weight. It is connected with the usual winding-ratchet B, against which bears the spring-pawl C, pivoted to the first wheel D. This wheel gears into pinion E shown in dotted lines on the shaft of the second wheel F, which gears into pinion G on the shaft of the third wheel H, and this last wheel gears into pinion I on the shaft of the fly J. To the rock-shaft K are attached three detents, L, M, and N, which prevent the train from moving, the detent L taking into a slot between two teeth of the wheel D, the detent M into a slot in wheel P, which wheel is shown in dotted lines on the shaft of wheel H and pinion G, and the detent N engaging with a pin, *h*, on said wheel H. To this rock-shaft K is also attached an arm, Q, which rests against the bent arm R attached to rock-shaft S. On the periphery of the first wheel of the right-hand train, which revolves once in every twenty-four hours, are fixed three pins, *a*, *b*, and *c*, the pins *a* and *c* being one hundred and eighty degrees apart, and the pin *b* equidistant from them. On the periphery of the first wheel D of the left-hand train are fixed eighteen pins, arranged as shown in the drawing, to wit, in four separate groups, the first three groups consisting each of three pins, and the fourth group of nine pins, and the several groups being equidistant from each other. The interval between the first and fourth groups, however, need not be the same as between the others. The rock-shaft T of the hammer has an arm, U, rigidly attached to it, and is connected with a spring, V, or equivalent device, so that the hammer will be raised by lifting the arm U and retracted by the spring to strike the bell in the usual manner. The pins *a*, *b*, and *c* are so arranged that a little before the hours of six a. m., twelve m., and six p. m., one of them shall bear against the hooked end of the arm R; and as the wheel to which they are fastened continues to revolve the pin shall press this bent arm against the arm Q, thereby turning the rock-shaft K and lifting the detents so as to liberate the striking train exactly at the hour. The train, being thus liberated, begins to revolve, and, as the pins on the wheel D successively lift and release the arm U, the hammer is caused to strike the Angelus with precision. Before the wheel D has completed one revolution the pin *a*, *b*, or *c*, as the case may be, has passed beyond the end of arm R, so that, when the Angelus has been duly sounded and the revolution of D is complete, the detents engage with their respective slots and arrest the striking train till again released at the proper time. The mechanism for striking the Angelus may also be combined with the ordinary mechanism for striking the hours or fractional parts thereof. The details of such combinations will readily suggest themselves to any clock-maker, and need not be described.

This improvement is applicable not only to large clocks in towers, belfries, &c., from which it is important that the Angelus should be sounded with regularity, and which are sometimes situated in localities where it is